438/287, 288
769, 770

DOCUMENT-IDENTIFIER: US 20010034096 A1

TITLE: Methods to form electronic devices

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A **first electrode** and a doped oxide layer laterally proximate thereof are provided over a substrate. A silicon nitride layer is formed over both the doped oxide layer and the **first electrode** to a thickness of no greater than 80 Angstroms over at least the **first electrode** by low pressure chemical vapor deposition at a pressure of at least 1 Torr, a temperature of less than 700.degree. C. and using feed gases comprising a silicon hydride and ammonia. The substrate with silicon nitride layer is exposed to oxidizing conditions comprising at least 700.degree. C. to form a **silicon dioxide** ~~layer~~ over the silicon nitride layer, with the thickness of silicon nitride over the doped oxide layer being sufficient to shield oxidizable substrate material beneath the doped oxide layer from oxidizing during the exposing. A **second electrode** is formed over the **silicon dioxide** layer and the **first electrode**. In another implementation, a layer comprising undoped oxide is formed over a doped oxide layer. A **first electrode** is formed proximate the undoped oxide layer and the undoped oxide layer. With the undoped oxide layer being outwardly exposed, a silicon nitride layer is formed on the undoped oxide layer and over the **first electrode** by low pressure chemical vapor deposition to a thickness of no greater than 80 Angstroms. Also disclosed are methods of forming transistor gate constructions and methods of forming electronic device

	Type	L #	Hits	Search Text	DBs	Time Stamp
1	BRS	L1	20512	(first adj electrode) and (second adj electrode)	USPAT	2002/08/21 08:42
2	BRS	L2	35854	(first adj electrode) and (second adj electrode)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/08/21 08:43
3	BRS	L3	302	2 and oxynitride	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/08/21 08:43
4	BRS	L4	43	3 and (gate adj dielectric)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/08/21 08:43
5	BRS	L5	33	4 and (silicon adj dioxide)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/08/21 08:44
6	BRS	L6	11	5 and (re-oxidize or re-ozidizing or re-oxidation)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/08/21 08:47

	Type	L #	Hits	Search Text	DBs	Time Stamp
7	BRS	L7	5	6 and ((rapid adj thermal) or (rapid adj anneal))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/08/21 08:48
8	BRS	L8	5	7 and (oxynitride)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/08/21 09:11
9	BRS	L9	31729	oxygen-containing	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/08/21 09:12
10	BRS	L10	301	9 and ((rapid adj anneal) or (rapid adj thermal))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/08/21 09:12
11	BRS	L11	84	10 and oxynitride	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/08/21 09:21

	Type	L #	Hits	Search Text	DBs	Time Stamp
12	BRS	L13	1186	(anneal or annealing or annealed or thermal) same (gate adj dielectric)	USPAT	2002/08/21 09:22
13	BRS	L14	157	13 and (conductive adj gate)	USPAT	2002/08/21 09:22
14	BRS	L15	84	14 and (silicon adj dioxide)	USPAT	2002/08/21 09:35
15	BRS	L17	400	oxygen adj containing adj plasma	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/08/21 09:36
16	BRS	L18	291	17 and (oxygen-containing)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/08/21 09:36
17	BRS	L19	17	18 and (gate adj dielectric)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/08/21 09:41
18	BRS	L20	0	((re adj2 oxidizing) or (re adj3 oxidation) or (re adj3 oxidize)) same mixture same N20 same H2	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/08/21 09:43

	Type	L #	Hits	Search Text	DBs	Time Stamp
19	BRS	L21	170	((re adj2 oxidizing) or (re adj3 oxidation) or (re adj3 oxidize)) same mixture	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/08/21 09:43
20	BRS	L25	3	21 and H2	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/08/21 09:44
21	BRS	L29	1504	((re-oxidizing) or (re-oxidize) or (re-oxidation))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/08/21 09:46
22	BRS	L30	150	29 same mixture	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/08/21 09:54
23	BRS	L32	1	N2O/H2	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/08/21 09:57

	Type	L #	Hits	Search Text	DBs	Time Stamp
24	BRS	L34	14424	(stablizing or stablize or stablized or stable) same (nitrogen)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/08/21 09:59
25	BRS	L35	2347	34 and plasma	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/08/21 09:58
26	BRS	L36	107	35 and (oxygen-containing)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/08/21 09:58
27	BRS	L37	1238	(stablizing or stablize or stablized or stable) near3 (nitrogen)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/08/21 09:59
28	BRS	L38	60	37 and (silicon adj dioxide)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/08/21 10:00

	Type	L #	Hits	Search Text	DBs	Time Stamp
29	BRS	L39	5	38 and (oxynitride)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/08/21 10:03
30	BRS	L40	4660	(forming or form or formed) near10 (oxygen-containing)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/08/21 10:04
31	BRS	L41	21	(form or forming or formed) same (uniform adj nitrogen)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/08/21 10:23
32	IS&R	L42	706	(438/287,288,769,770).CCLS.	USPAT	2002/08/21 10:23
33	BRS	L43	26	42 and ((re-oxidizing) or (re-oxidation))	USPAT	2002/08/21 10:24

	Type	L #	Hits	Search Text	DBs	Time Stamp
1	BRS	L1	23016	oxygen-containing	USPAT	2002/08/21 14:18
2	BRS	L2	48751	oxygen adj3 containing	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/08/21 14:19
3	BRS	L3	217	2 and (re adj3 (oxidize or oxidizing or oxidation))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/08/21 14:20
4	BRS	L4	8	3 and (oxynitride)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/08/21 14:25
5	BRS	L5	0	(re adj3 (oxidize or oxidized or oxidizing or oxidation)) same (rapid adj3 (thermal or anneal or annealing)) same (plasma adj3 induced)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/08/21 14:27
6	BRS	L6	28	(re adj3 (oxidize or oxidized or oxidizing or oxidation)) same (rapid adj3 (thermal or anneal or annealing))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/08/21 14:29

	Type	L #	Hits	Search Text	DBs	Time Stamp
7	BRS	L7	5	6 same oxynitride	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/08/21 14:30
8	BRS	L8	253	(oxidizer or oxidizers) near10 (hydrogen same hydrogen)	USPAT	2002/08/21 14:31
9	BRS	L9	2	8 and oxynitride	USPAT	2002/08/21 14:39